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 W O R L D  
 (TM)  
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MSPrch\_pp protein - protein database search, using Smith-Waterman algorithm  
 Run on: Sat May 13 09:17:00 2000; MasPar time 3.04 Seconds  
 Tabular output not generated. 124.592 Million cell updates/sec

Title: >US-09-331-631-27  
 Description: (1-16) from US09331631.pep  
 Perfect Score: 120  
 Sequence: 1 OKHRSQILGCTYLXQOL 16

Scoring table: PAM 150  
 Gap 15

Searched: 188963 seqs, 23686106 residues

Post-processing: Minimum Match 0%  
 Listing first 45 summaries

Database: a-geneseq35  
 1:geneseqp

Statistics: Mean 19.307; Variance 54.468; scale 0.354

Pred. No. is the number of results predicted by chance to have a  
 score greater than or equal to the score of the result being printed,  
 and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description	Pred. No.
1	105	87.5	17	1	W62840	Stenocarpus sinuatus a
2	64	53.3	195	1	R24944	Sequence of ovine trop
3	64	53.3	195	1	R24941	Sequence of ovine trop
4	64	53.3	195	1	P91396	Isoform of class II al
5	64	53.3	195	1	R24945	Sequence of ovine trop
6	60	50.0	195	1	R24943	Sequence of ovine trop
7	59	49.2	23	1	W62839	Stenocarpus sinuatus a
8	59	49.2	135	1	Y03782	S. aureus polypeptide
9	59	49.2	377	1	R70029	Tobacco cluster-A prot
10	57	47.5	195	1	R24942	Sequence of ovine trop
11	57	47.5	195	1	R04540	Ovine trophoblast prot
12	56	46.7	238	1	W81981	Enrlichia sp. B82.3 pr
13	55	45.8	111	1	W28096	Staphylococcus aureus
14	55	45.8	222	1	Y05539	Wheat Type I glutathio
15	55	45.8	396	1	W56695	Retracycline resistanc
16	55	45.8	647	1	W34535	Helicoverpa armigera v
17	55	45.8	647	1	R49662	Sequence of Heliothis
18	54	45.0	201	1	W20604	H. pylori cytoplasmic
19	54	45.0	410	1	R10693	Cephalosporin antibiotic
20	54	45.0	706	1	W81353	Human hfrizled-6 prot
21	53	44.2	47	1	W20493	H. pylori secreted or
22	53	44.2	86	1	W20741	H. pylori secreted or
23	53	44.2	119	1	R60515	Mouse beta-2 microglob

Result ID	Score	Query Match	Length	DB ID	Description	Pred. No.
24	53	44.2	371	1	R70025	Tobacco chitinase enco
25	53	44.2	1279	1	R60872	ST6-CFTR chimera H4.
26	53	44.2	1279	1	R60873	ST6-CFTR chimera H5.
27	52	43.3	161	1	W71485	Helicobacter polypepti
28	52	43.3	195	1	R04539	cDNA clone of sequence
29	52	43.3	544	1	W71203	Protein encoded by ORF
30	52	43.3	802	1	R90848	Gibberellin (GA1), ent
31	51	42.5	86	1	W26417	Swinepox virus HindIII
32	51	42.5	331	1	W29817	Mammalian AMPK-gamma s
33	51	42.5	349	1	W06416	Phosphotriesterase-rel
34	51	42.5	725	1	W80363	The large subunit (RI)
35	50	41.7	47	1	Y03000	Fragment of human secr
36	50	41.7	72	1	Y02899	Fragment of human secr
37	50	41.7	553	1	W10691	Newcastle disease viru
38	50	41.7	553	1	W06828	Newcastle disease viru
39	50	41.7	553	1	R49141	Newcastle disease viru
40	50	41.7	572	1	W31273	Mouse frizzled-7 prote
41	50	41.7	585	1	W31271	Human frizzled-5 prote
42	50	41.7	666	1	W31268	Mouse frizzled-3 prote
43	50	41.7	758	1	W97677	Human KDS2 protein kin
44	50	41.7	1311	1	W72971	Precis coenia patched
45	50	41.7	1311	1	W52197	Precis coenia (butterf

## ALIGNMENTS

Result ID	Score	Query Match	Length	DB ID	Description	Pred. No.
AC	W62840	Standard; Protein; 17 AA.				
DT	27-OCT-1998	(first entry)				
DE	Stenocarpus sinuatus antimicrobial protein.					
KW	antimicrobial protein; infestation; control.					
OS	Stenocarpus sinuatus.					
FT	Key	Location/Qualifiers				
FT	Misc_difference 13	/note="undefined amino acid"				
PN	W09827805-A1.					
PD	02-JUL-1998.					
PF	22-DEC-1997; AU00874.					
PR	20-DEC-1996; AU-004275.					
PA	(RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY.					
PI	Bower NI, Goulter KC, Green JL, Manners JM, Marcus JP;					
DR	WPI. 98-377279/32.					
PT	Novel anti-microbial protein from e.g. Macadamia integrifolia -					
PS	useful for controlling microbial infestations of plants or mammals					
CC	Claim 1: Page 66: 96pp: English.					
CC	The sequence is that of an antimicrobial protein which can					
CC	be used to control microbial infestations in plants and mammalian					
CC	animals.					
CC	Sequence 17 AA:					
SO	Sequence 17 AA:					
DB	1 OKHRSQILGCTYLXQOL 17					
OY	1 OKHRSQILGCTYLXQOL 16					
RESULT	2					
ID	R24944 standard; Protein; 195 AA.					
AC	R24944;					
DT	03-JAN-1992 (first entry)					
DE	Sequence of ovine trophoblastin variant XC.					
KW	antiviral; antiinflammatory; antitumour; immunomodulator; immunogen;					
KW	trophoblastin; antitubercytic agent.					
OS	Ammotragus lervia.					
FT	Key	Location/Qualifiers				
FT	peptide	1..23				
FT	W09209691-A.	/label= signal				
PN	11-JUN-1992.					

PF 29-NOV-1991; F00953.  
 PR 29-NOV-1990; FR-014945.  
 PA (INRG ) INRA INST NAT RECH AGRONOMIQUE.  
 PI (TRGE ) TRANSGENE SA.  
 PI Degryse E, Chaouat G, Charlier M, Charpigny G, Gaye P,  
 PI Martal J, Reinaud P;  
 DR WPI: 92-217070/26.  
 PT New type I interferon variants with added N-terminal di:peptide -  
 PT include expression cassettes providing high yield in yeast, esp.  
 PT trophoblast derivs. with e.g. anti-luteolytic activity  
 PS Claim 7; page 30; 53pp; French.  
 CC The DNA sequence encoding the precursor of ovine trophoblastin was  
 CC disclosed in PCT WO 89/08706 (see R24941). R24942-R24945 are  
 CC isoforms of trophoblastin. They have anti-luteolytic activity and  
 CC are used to improve survival of transplanted embryos; as a reagent  
 CC for detecting viability of embryos at an early stage of its  
 CC development; and to improve the fertility of livestock.  
 SQ Sequence 195 AA;

Query Match 53.3%; Score 64; DB 1; Length 195;  
 Best Local Similarity 77.8%; Pred. No. 5.46e+00;  
 Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 22 LGCYLSQRL 30  
 ||||| 1:1  
 QY 8 LGCYLXQQL 16

RESULT 3  
 ID R24941 standard; Protein; 195 AA.  
 AC R24941;  
 DT 03-JAN-1992 (first entry)  
 DE Sequence of ovine trophoblastin.  
 KW Antiviral; antiinflammatory; antitumour; immunomodulator; immunogen;  
 KW trophoblastin; antiluteolytic agent.  
 OS Ammotragus lervia.  
 FH Key Location/Qualifiers  
 FT peptide 1..23  
 FT /label= signal  
 PN WO9209691-A.  
 PD 11-JUN-1992.  
 PF 29-NOV-1991; F00953.  
 PR 29-NOV-1990; FR-014945.  
 PA (INRG ) INRA INST NAT RECH AGRONOMIQUE.  
 PA (TRGE ) TRANSGENE SA.  
 PI Degryse E, Chaouat G, Charlier M, Charpigny G, Gaye P,  
 PI Martal J, Reinaud P;  
 DR WPI: 92-217070/26.  
 PT New type I interferon variants with added N-terminal di:peptide -  
 PT include expression cassettes providing high yield in yeast, esp.  
 PT trophoblast derivs. with e.g. anti-luteolytic activity  
 PS Disclosure; Fig 1; 53pp; French.  
 CC The DNA sequence encoding the precursor of ovine trophoblastin was  
 CC disclosed in PCT WO 89/08706 (see R24941). R24942-R24945 are  
 CC isoforms of trophoblastin. They have anti-luteolytic activity and  
 CC are used to improve survival of transplanted embryos; as a reagent  
 CC for detecting viability of embryos at an early stage of its  
 CC development; and to improve the fertility of livestock.  
 SQ Sequence 195 AA;

Query Match 53.3%; Score 64; DB 1; Length 195;  
 Best Local Similarity 77.8%; Pred. No. 5.46e+00;  
 Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 22 LGCYLSQRL 30  
 ||||| 1:1  
 QY 8 LGCYLXQQL 16

RESULT 4  
 ID P91396 standard; protein; 195 AA.

AC P91396;  
 DT 15-FEB-1990 (first entry)  
 DE Isoform of class II alpha-interferon trophoblastine precursor.  
 KW Antiviral; antitumour.  
 PN WO8908706-A.  
 PD 21-SEP-1989.  
 PF 17-MAR-1989; F00116.  
 PR 18-MAR-1988; FR-003591.  
 PA (INRG ) Inst Nat Rech Agron.  
 PI Martal J, Charpigny G, Gaye P, Pernollet J, Charlier M, Guillemot M,  
 PI Huet J, Reinaud P, Hue D, Chene N, La Bonnardiere C;  
 DR WPI: 89-292521/40.  
 PT New isoform(s) of the class II alpha interferon trophoblastine  
 PT - with eg antiviral, antitumour and immuno-modulating activities, and  
 PT new DNA encoding sequences.  
 PS Claim 11; page 11; 47pp; French.  
 CC The isoform (23 kd) can be used for immunological, rejection-inhibiting,  
 CC and cell differentiation activities. It can inhibit luteolysis at the  
 CC start of pregnancy, monitor embryo viability, and protect embryos during  
 CC transfer to the womb of a recipient.  
 SQ Sequence 195 AA;

Query Match 53.3%; Score 64; DB 1; Length 195;  
 Best Local Similarity 77.8%; Pred. No. 5.46e+00;  
 Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 22 LGCYLSQRL 30  
 ||||| 1:1  
 QY 8 LGCYLXQQL 16

RESULT 5  
 ID R24945 standard; Protein; 195 AA.  
 AC R24945;  
 DT 03-JAN-1992 (first entry)  
 DE Sequence of ovine trophoblastin variant X4.  
 KW Antiviral; antiinflammatory; antitumour; immunomodulator; immunogen;  
 KW trophoblastin; antiluteolytic agent.  
 OS Ammotragus lervia.  
 FH Key Location/Qualifiers  
 FT peptide 1..23  
 FT /label= signal  
 PN WO9209691-A.  
 PD 11-JUN-1992.  
 PF 29-NOV-1991; F00953.  
 PR 29-NOV-1990; FR-014945.  
 PA (INRG ) INRA INST NAT RECH AGRONOMIQUE.  
 PA (TRGE ) TRANSGENE SA.  
 PI Degryse E, Chaouat G, Charlier M, Charpigny G, Gaye P,  
 PI Martal J, Reinaud P;  
 DR WPI: 92-217070/26.  
 PT New type I interferon variants with added N-terminal di:peptide -  
 PT include expression cassettes providing high yield in yeast, esp.  
 PT trophoblast derivs. with e.g. anti-luteolytic activity  
 PS Claim 7; page 30; 53pp; French.  
 CC The DNA sequence encoding the precursor of ovine trophoblastin was  
 CC disclosed in PCT WO 89/08706 (see R24941). R24942-R24945 are  
 CC isoforms of trophoblastin. They have anti-luteolytic activity and  
 CC are used to improve survival of transplanted embryos; as a reagent  
 CC for detecting viability of embryos at an early stage of its  
 CC development; and to improve the fertility of livestock.  
 SQ Sequence 195 AA;

Query Match 53.3%; Score 64; DB 1; Length 195;  
 Best Local Similarity 77.8%; Pred. No. 5.46e+00;  
 Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 22 LGCYLSQRL 30  
 ||||| 1:1  
 QY 8 LGCYLXQQL 16

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RESULT 6
ID R24943 standard; Protein; 195 AA.
AC R24943;
DE 03-JAN-1992 (first entry)
DE Sequence of ovine trophoblastin variant Xb
KW Antiviral; antinflammatory; antitumor; immunomodulator; immunogen;
OS trophoblastin; antileukolytic agent.
FH Key Location/Qualifiers
FT peptide 1..23
FT /label= signal
FT WO9209691-A.
FT 11-JUN-1992.
FT 29-NOV-1991; F00953.
FT 29-NOV-1990; FR-014945.
FT 29-NOV-1990; FR-014946.
FT (INRG) INRA INST NAT RECH AGRONOMIQUE.
FT (TRGE) TRANSENE SA.
FT Degryse E, Chaouat G, Charlier M, Charpigny G, Gaye P,
FT Martal J, Reinaud P;
FT MPI: 92-217070/26.
FT New type I interferon variants with added N-terminal dipeptide -
FT include expression cassettes providing high yield in yeast, esp.
FT trophoblast derivs with e.g. anti-leukolytic activity
FT Claim 7; page 30; 53pp; French.
CC The DNA sequence encoding the precursor of ovine trophoblastin was
CC disclosed in PCT WO 89/08706 (see R24941). R24942-R24945 are
CC isoforms of trophoblastin. They have anti-leukolytic activity and
CC are used to improve survival of transplanted embryos; as a reagent
CC for detecting viability of embryos at an early stage of its
CC development; and to improve the fertility of livestock.
SQ Sequence 195 AA;

Query Match 50.0%; Score 60; DB 1; Length 195;
Best Local Similarity 66.7%; Pred. No. 1.58e+01;
Matches 6; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

DB 22 LGCYLSERT 30
OY 8 LGCYLXQOL 16

RESULT 7
ID W62839 standard; Protein; 23 AA.
AC W62839;
DE 27-OCT-1998 (first entry)
DE Stenocarpus sinuatus antimicrobial protein.
KW Antimicrobial protein; infection; control.
OS Stenocarpus sinuatus.
PN WO9827805-A1.
PD 02-JUL-1998.
PE 22-DEC-1997; AU0874.
PR 20-DEC-1996; AU-004275.
PA (RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY.
PI Bower NJ, Goulter KC, Green JL, Mannes JM, Marcus JP;
DR MPI: 98-377279/32.
PT Novel antimicrobial protein from e.g. Macadamia integrifolia -
PT useful for controlling microbial infections of plants or mammals
PT Claim 1; Page 65; 96pp; English.
CC The sequence is that of an antimicrobial protein which can
CC be used to control microbial infections in plants and mammalian
CC animals.
SQ Sequence 23 AA;

Query Match 49.2%; Score 59; DB 1; Length 23;
Best Local Similarity 61.5%; Pred. No. 2.05e+01;
Matches 8; Conservative 2; Mismatches 2; Indels 1; Gaps 1;

DB 10 RSEILCYRLCOO 22
OY 4 RSOILGCT-LXQO 15

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RESULT 8
ID Y03782 standard; Protein; 135 AA.
AC Y03782;
DE 11-JUN-1999 (first entry)
DE S. aureus polypeptide.
KW Staphylococcus aureus polypeptide; thyroiditis; infective carditis;
KW lung abscess; secretory diarrhoea; cerebral abscess; conjunctivitis;
KW toxic shock syndrome; folliculitis; septic arthritis; antibacterial;
KW H pylori infection; gastric ulcer; adenocarcinoma.
OS Staphylococcus aureus.
PN EP-905243-A2.
PD 31-MAR-1999.
PE 03-AUG-1998; 306185.
PR 05-AUG-1997; US-055387.
PA (SMK) SMITHKLINE BEECHAM CORP.
PA (SMK) SMITHKLINE BEECHAM PLC.
PI Burnham MKR, Lonetto MA, Warren PV;
DR MPI: 99-19267/17.
DR N-PSDB; X31852.
PT New essential polypeptides from Staphylococcus aureus useful for
PT treating diseases such as infective endocarditis and toxic shock
PT syndrome
PS Claim 11; Page 24-25; 70pp; English.
CC The invention provides new Staphylococcus aureus polypeptides (Y03781-94)
CC and the genes (X31851-864) encoding them. Host cells containing vectors
CC comprising the nucleic acid sequences are used for the recombinant
CC expression of the proteins. The polypeptides can be used to screen for
CC modulators for use in antibacterial therapy. The polypeptides, their
CC antagonists and agonists are used to prevent or treat diseases caused by
CC S. aureus such as thyroiditis, lung abscesses, infective carditis,
CC secretory diarrhoea, cerebral abscesses, conjunctivitis, toxic shock
CC syndrome, folliculitis and septic arthritis. Screening for the presence of
CC the polypeptides may be used to diagnose, predict the susceptibility to,
CC or stage the progress of these S. aureus diseases and diseases caused by
CC Helicobacter pylori such as gastric ulcers and gastric adenocarcinoma.
CC There is not much information known about the essential genes expressed
CC by S. aureus during infection but these new polypeptides have been
CC identified as essential. They can therefore be used to develop
CC antibacterial compounds specific for these essential genes and this
CC ensures the effectiveness of the compounds in killing S. aureus. In
CC addition, these polypeptides can be used to effectively diagnose and
CC treat infections and diseases caused by S. aureus without the risk of
CC development of antibiotic resistance. The present sequence represents a
CC S. aureus polypeptide which has homology to a B. subtilis probable
CC acetyltransferase.
SQ Sequence 135 AA;

Query Match 49.2%; Score 59; DB 1; Length 135;
Best Local Similarity 43.8%; Pred. No. 2.05e+01;
Matches 7; Conservative 3; Mismatches 6; Indels 0; Gaps 0;

DB 42 HMRKTSIGYLYXOP 57
OY 1 QKRSQILGCTLXQOL 16

RESULT 9
ID R70029 standard; Protein; 377 AA.
AC R70029;
DE 29-SEP-1995 (first entry)
DE Tobacco cluster-A protein encoded by genomic clone.
KW Tobacco; chitinase; antifungal; fungicide; Cluster-A.
OS Nicotiana tabacum.
FH Key Location/Qualifiers
FT peptide 1..25
FT /label= signal
FT /label= peptide
FT misc_difference 28..29
FT /note= "CDNA encodes additional ile here"
FT misc_difference 188..201
FT /label= Determined by sequencing the protein
FT misc_difference 222..247
FT /note= "Determined by sequencing the protein"
FT EP-639642-A.

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DB 204 QILGFLRHL 214  
 1111 : : :  
 QY 6 QILGFLRHL 16

RESULT 13  
 ID W28096 standard; Protein: 111 AA.  
 AC W28096;  
 DT 01-SEP-1998 (first entry)  
 DE Staphylococcus aureus protein of unknown function.  
 KM Staphylococcus aureus protein: ribozyme; antisense sequence; control;  
 KM Staphylococcal gene; regulatory element; bacterial gene expression;  
 KM vaccine; Staphylococcal infection; food poisoning; scaled skin syndrome;  
 KM toxic shock syndrome.  
 OS Staphylococcus aureus.  
 FT Key Location/Qualifiers  
 FT Misc\_difference 1. 111  
 FT /note="residues designated X are not defined in  
 FT the specification"

PN W09730070-A1.  
 PD 21-AUG-1997.  
 PE 19-FEB-1997: U02318.  
 PR 20-FEB-1996: US-011888.  
 PA (SMK ) SMTKLINE BECHAM CORP.  
 PI Black MT, Burnham MK, Hodgson JE, Knowles DJC, Nicholas RO,  
 PI Pratt JM, Reichard RW, Rosenberg M, Ward JM;  
 DR WPI: 97-424969/39.  
 DR N-PSDB: T84032.  
 PT Novel polypeptide(s) from Staphylococcus aureus strain WCUH29 - used  
 PT to isolate antimicrobial compounds, and in vaccines against S.  
 PT aureus infection  
 PS Claim 6: Page 463; 989pp; English.  
 CC The present sequence represents a Staphylococcus aureus protein of  
 CC unknown function. The DNA sequence was isolated from a library of  
 CC clones of S. aureus WCUH 29 in Escherichia coli. The DNA sequence can  
 CC be used in the construction of ribozymes and antisense sequences to  
 CC control the expression of Staphylococcal genes. The DNA sequence is  
 CC also useful as a source of regulatory elements for the control of  
 CC bacterial gene expression. The present protein may be used to produce  
 CC vaccines to enable a host to produce specific antibodies with  
 CC antibacterial action. These vaccines and antibodies would protect  
 CC a host against invasion by S. aureus, and conditions relating to  
 CC Staphylococcal infection, e.g. Staphylococcal food poisoning, scaled  
 CC skin syndrome, and toxic shock syndrome.  
 SQ Sequence 111 AA;

Query Match 45.8%; Score 55; DB 1; Length 111;  
 Best Local Similarity 85.7%; Pred No. 5.75e+01;  
 Matches 6; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

DB 7 CYLKQOL 13  
 111111  
 QY 10 CYLKQOL 16

RESULT 14  
 ID Y05539 standard; Protein: 222 AA.  
 AC Y05539;  
 DT 05-JUL-1999 (first entry)  
 DE Wheat Type I glutathione transferase subunit IC2.  
 KM Glutathione transferase; GST; glutathione peroxidase; wheat; WIC2;  
 KM IC2 herbicide resistance; transgenic plant.  
 OS Triticum aestivum.  
 PN W09914337-A2.  
 PD 25-MAR-1999.  
 PE 16-SEP-1998: G02802.  
 PR 16-SEP-1997: GB-019727.  
 PA (RHON ) RHON-POULENC AGRIC LTD.  
 PI Cole DJ, Cummins I, Edwards R;  
 DR WPI: 99-244035/20.  
 DR N-PSDB: X25146.  
 PT New isolated glutathione transferase subunit polynucleotides

PS Claim 3; Page 83; 101pp; English.  
 CC The present sequence represents IC2, a wheat glutathione transferase  
 CC (GST) subunit that resembles the type I GSTs from maize. Clone  
 CC WIC2 (see X25146), which codes for IC2, was isolated from a cDNA  
 CC expression library prepared from fenclorazole-ethyl (herbicide  
 CC salene) treated wheat shoots using maize GST antiserum.  
 CC Recombinant IC2 shows activity toward herbicides and non-herbicide  
 CC substrates, and also has glutathione peroxidase activity toward  
 CC organic hydroperoxides. The invention provides cDNAs and genomic  
 CC DNAs (see X25144-52) encoding wheat GST subunits (see Y05537-45)  
 CC active in herbicide metabolism. This is fundamental to  
 CC understanding GST detoxification in wheat and in the development  
 CC of transgenic herbicide resistant plants expressing wheat GSTs.  
 CC The invention also provides methods of identifying compounds  
 CC capable of metabolism by GST, or compounds that induce GST  
 CC expression in gramaceous plants, and for determining the GST  
 CC level in a sample of seed or flour. Transgenic plants, host cells  
 CC used for production of GST subunits and GST dimeric proteins, and  
 CC vectors are also provided.  
 SQ Sequence 222 AA;

Query Match 45.8%; Score 55; DB 1; Length 222;  
 Best Local Similarity 50.0%; Pred No. 5.75e+01;  
 Matches 5; Conservative 5; Mismatches 0; Indels 0; Gaps 0;

DB 78 RKHPELLGC 87  
 :1111111111  
 QY 1 QKHRSQILGC 10

RESULT 15  
 ID W56695 standard; Protein: 396 AA.  
 AC W56695;  
 DT 24-JUL-1998 (first entry)  
 DE Tetracycline resistance sequence contained in plasmid PRZTL1.  
 KM Tn5 transposase, modified; enzyme; in vitro transposition; mutant;  
 KM target; marker; transposon 5; Plasmid PRZTL1; tetracycline resistance.  
 OS Synthetic.  
 OS Escherichia coli.  
 PN W09810077-A1.  
 PD 12-MAR-1998.  
 PE 09-SEP-1997: U15941.  
 PR 02-MAY-1997: US-850880.  
 PR 09-SEP-1996: US-814877.  
 PA (WISC ) WISCONSIN ALUMNI RES FOUND.  
 PI Goryshin IV, Reznikoff WS, Zhou H;  
 DR WPI: 98-193627/17.  
 DR N-PSDB: V28398.  
 PT Modified Tn5 transposase construct used in novel system for in vitro  
 PT transposition - used to, e.g. create absolute defective mutants,  
 PT provide selective markers and to facilitate insertion of specialised  
 PT DNA sequences into target DNA  
 PS Disclosure: Pages 35-46; 73pp; English.  
 CC This tetracycline resistance sequence is contained in the plasmid  
 CC PRZTL1 which is used to demonstrate in vitro transposition of a  
 CC transposable element located between a pair of Tn5 (transposon 5)  
 CC outside end (OE) termini. The invention provides a genetic construct  
 CC that contains a nucleotide sequence encoding a modified Tn5 transposase  
 CC enzyme that has both greater avidity for Tn5 OE repeats and is less  
 CC likely to assume an inactive multimeric form than a wild type Tn5  
 CC transposase and a transposable DNA sequence flanked at its 5' and 3' ends  
 CC by an 18 or 19 base pair flanking DNA sequence comprising nucleotide A  
 CC at position 10, T at 11 and A at 12. The modified Tn5 transposase and  
 CC the transposable DNA which is a DNA donor molecule are used in a system  
 CC for in vitro transposition. The system and method can be used to create  
 CC absolute defective mutants, to provide selective markers to target DNA,  
 CC to provide portable regions of homology to a target DNA, to facilitate  
 CC insertion of specialised DNA sequences into target DNA, to provide primer  
 CC binding sites or tags for DNA sequencing, to facilitate production of  
 CC genetic fusion for gene expression studies and protein domain mapping, as  
 CC well as to bring together other desired combinations of DNA sequences  
 CC (combinatorial genetics). The modified Tn5 transposase facilitates in  
 CC vitro transposition reaction rates of at least about 100-fold higher

CC than can be achieved using wild type transposase (as measure in vivo).  
 CC In vitro transposition using this system can also use donor DNA and  
 CC target DNA that is circular or linear. The system also requires no  
 CC outside high energy source and no other protein other than the modified  
 CC transposase.  
 SO Sequence 396 AA;

Query Match 45.8%; Score 55; DB 1; Length 396;  
 Best Local Similarity 55.6%; Pred. No. 5.75e+01;  
 Matches 5; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 175 ILGCELMOE 183  
 :|||:|:  
 QY 7 ILGCELMOE 15

Search completed: Sat May 13 09:17:07 2000  
 Job time : 7 secs.